	Claims remaining after Amendment		Highest number previously paid for		Present extra
Total	20	-	22	=	0
Independent	4	-	4	=	0

IN THE CLAIMS

The following is a complete listing of revised claims with a status identifier in parenthesis. Applicants note that they have withdrawn the amendments to claims 19 and 21 contained in their initial response filed May 22, 2006.

LISTING OF CLAIMS

1. (Previously Presented) A method for adding or dropping at least one optical channel of a wavelength division multiplexed (WDM) signal, the method comprising:

receiving a WDM input signal at an add/drop node;

coupling the WDM input signal to both a drop transmission path and a through transmission path within the add/drop node;

selectively dropping one or more optical channels from the WDM input signal in the drop transmission path;

in the through transmission path, selectively blocking the one or more optical channels being dropped from the WDM input signal so that only optical channels not being dropped at the add/drop node are passed on the through transmission path;

in an add transmission path within the add/drop node, selectively adding one or more optical channels by

optically combining a plurality of optical channels into a WDM add signal, the plurality of optical channels in the WDM add signal having wavelengths corresponding to the wavelengths of the optical channels in the WDM input signal, wherein one or more of the plurality of optical channels are to be added at the add/drop node, and

selectively blocking the optical channels that have been previously added at the add/drop node and passed along in the through transmission path to avoid wavelength collisions;

dynamically equalizing the gain of optical channels in the through and add transmission paths on a per-channel basis; and

combining the one or more optical channels from the add transmission path with the optical channels in the through transmission path to generate a WDM output signal for transmission from the add/drop node.

2. (Previously Presented) The method according to claim 1, wherein the steps of selectively blocking the one or more optical channels being dropped and selectively blocking the optical channels not being added are dynamically and automatically programmed as a function of changing add/drop requirements.

3. (Cancelled)

4. (Original) The method according to claim 1, further comprising the step of separating the WDM input signal into at least a first and second group of optical channels according to a prescribed pattern so that channel spacing between the optical channels is thereby increased.

5. (Original) The method according to claim 4, wherein the step of separating comprises de-interleaving the WDM input signal so that optical channels in each of the first and second groups are spaced apart by at least one wavelength.

6. (Original) The method according to claim 4, wherein the step of separating comprises de-interleaving the WDM input signal so that adjacent optical channels in the WDM input signal are located in a different one of the first and second groups such that the first group includes optical channels having an odd channel number and wherein the second group includes optical channels having an even channel.

7. (Original) The method according to claim 4, further comprising the step of routing the optical channels in the first group along an express routing path within the add/drop node such that the optical channels in the first group cannot be dropped at the add/drop node.

8. (Original) The method according to claim 7, further comprising the step of interleaving the optical channels from the express routing path with the optical channels combined from the add and through paths.

9. (Original) The method according to claim 1, further comprising the step of optically demultiplexing the WDM input signal in the drop transmission path into a plurality of individual optical channels.

10. (Original) The method according to claim 9, further comprising the step of separating the WDM input signal in the drop transmission path into at least two groups of optical channels according to a prescribed pattern so that channel spacing between the optical channels is increased prior to optically demultiplexing the WDM input signal.

11. (Original) The method according to claim 10, wherein the step of separating comprises de-interleaving so that optical channels in each of the respective groups are spaced apart by one wavelength.

12. (Original) The method according to claim 1, wherein the WDM input signal comprises a plurality of optical channels of different wavelengths and wherein each optical channel in the WDM input signal is capable of being dropped and wherein each of the optical channels can be added to the output WDM signal.

13. (Previously Presented) An add/drop node capable of adding or dropping at least one optical channel of a wavelength division multiplexed (WDM) signal, the add/drop node comprising:

an optical coupler for coupling a WDM input signal to both a drop transmission path and a through transmission path within the add/drop node;

an apparatus coupled to the drop transmission path for optically separating the WDM input signal into a plurality of optical channels, wherein one or more of the plurality of optical channels are selectively dropped from the WDM input signal;

a first wavelength blocking element coupled to the through transmission path for selectively blocking the one or more optical channels being selectively dropped from the WDM input signal so that only optical channels not being dropped at the add/drop node are passed on the through transmission path, the first element comprising a first dynamic gain equalizer element for adjusting the gain of optical channels in the through transmission path on a per-channel basis;

in an add transmission path within the add/drop node,

an apparatus for combining a plurality of optical channels to form a WDM add signal, the plurality of optical channels in the WDM add signal having wavelengths corresponding to the wavelengths of the optical channels in the WDM input signal, wherein one or more of the plurality of optical channels in the WDM add signal are to be added at the add/drop node, and

a second wavelength blocking element for selectively blocking the optical channels that have been previously added at the add/drop node and passed along in the through transmission path to

avoid wavelength collisions, the second element comprising a second dynamic gain equalizer element for adjusting the gain of optical channels in the add transmission path on a per-channel basis; and

a combiner coupled to each of the add and through transmission paths for combining the one or more optical channels from the add transmission path with the optical channels in the through transmission path to generate a WDM output signal for transmission from the add/drop node.

14. (Original) The add/drop node according to claim 13, further comprising a controller coupled to and communication with the first and second wavelength blocking elements, the first and second wavelength blocking elements being dynamically and automatically programmable in response to the controller and as a function of changing add/drop requirements.

15. (Cancelled)

16. (Original) The add/drop node according to claim 13, further comprising a first optical interleaver for separating the WDM input signal into at least a first and second group of optical channels according to a prescribed pattern so that optical channels in each of the first and second groups are spaced apart by at least one wavelength within their respective groups.

17. (Original) The add/drop node according to claim 16, wherein the first group of optical channels are routed in an express routing path within the add/drop node such that the optical channels in the first group cannot be dropped at the add/drop node, the add/drop node further comprising a second optical interleaver for combining the optical channels from the express routing path with the optical channels combined from the add and through paths.

18. (Original) The add/drop node according to claim 13, wherein the apparatus for optically separating the WDM input signal comprises one or more optical demultiplexers and the

apparatus for combining a plurality of optical channels in the add transmission path comprises one or more optical multiplexers.

19. (Currently Amended) A method for adding/dropping at least one optical channel of a wavelength division multiplexed (WDM) signal at an add/drop node, the add/drop node including a first transmission path for dropping selected optical channels from the WDM signal, a second transmission path for routing selected optical channels through the add/drop node, and a third transmission path for adding selected optical channels to the WDM signal, the WDM signal having a plurality of optical channels of different wavelengths, the method comprising:

receiving a WDM input signal at the add/drop node;

distributing the WDM input signal to the first and second transmission paths;

dropping one or more optical channels from the WDM input signal in the first transmission path;

adding one or more optical channels to the WDM input signal in the third transmission path that will not cause wavelength collisions with any other previously added channel;

selectively routing optical channels in each of the second and third transmission paths to provide a reconfigurable add/drop capability by

selectively blocking wavelengths in the second transmission path that correspond to optical channels being dropped from the WDM input signal in the first transmission path, and

selectively passing wavelengths in the third transmission path that correspond to optical channels being added at the add/drop node;

~~dynamically equalizing the gain of optical channels in the through and add transmission paths on a per channel basis;~~ and

combining the optical channels from the second and third transmission paths to generate a WDM output signal for transmission from the add/drop node.

20. (Original) The method according to claim 19, wherein the steps of selectively blocking and selectively passing are dynamically configurable as a function of changing add/drop requirements.

21. (Currently Amended) A method for adding/dropping at least one optical channel of a wavelength division multiplexed (WDM) signal at an add/drop node, the add/drop node including a first transmission path for dropping selected optical channels from the WDM signal, a second transmission path for routing selected optical channels through the add/drop node, and a third transmission path for adding selected optical channels to the WDM signal, the WDM signal having a plurality of optical channels of different wavelengths, the method comprising:

receiving a WDM input signal at the add/drop node;

distributing the WDM input signal to the first and second transmission paths;

dropping one or more optical channels from the WDM input signal in the first transmission path;

adding one or more optical channels to the WDM input signal in the third transmission path that will not cause wavelength collisions with any other previously added channel;

selectively routing optical channels in each of the second and third transmission paths to provide a reconfigurable add/drop capability by

selectively blocking wavelengths in the second transmission path that correspond to optical channels being added to the WDM input signal in the third transmission path, and

selectively passing wavelengths in the third transmission path that correspond to optical channels being added at the add/drop node;

~~dynamically equalizing the gain of optical channels in the through and add transmission paths on a per channel basis;~~ and